



Professional & Premium Solar Package Installation Instructions

⚠ IMPORTANT SAFETY WARNINGS

- **Electrical Safety:** Ensure all power connections are made with the system OFF before energizing.
- **Battery Handling:** Lithium Iron Phosphate (LiFePO₄) batteries are safe but must not be short-circuited or punctured. Do not reverse polarity.
- **Wiring Order:** You **MUST** connect in the correct sequence. Incorrect order can permanently damage the controller.
- **Technical Support:** Questions during installation? Call (800) 962-0956 or email info@flagco.com.

USING THIS GUIDE

- **Wiring Order is Critical:** Always connect in this sequence: Battery → Controller → Solar Panel → Beacon (Load). Disconnect in reverse.
- **Controller Settings:** You must update the Battery Type from the factory default (B1) to B3 before first use.
- **Pre-Installation Test:** Verify the Beacon is working on the ground before mounting.



INSTALLATION

- **Wiring sequence:** Battery → Controller → Solar Panel → Beacon. Follow this order every time. Disconnect in reverse order.





Professional & Premium Solar Package

Installation Instructions

Step 1: Pre-Installation Function Test

Before mounting any hardware, verify your Beacon is working correctly.

1. Connect the Beacon to a compatible 12V power source on the ground.
2. Turn on the power — the Beacon light should illuminate immediately.
3. If the light does not turn on, check all connections. Do not proceed until the unit is confirmed working.

Step 2: Mount the Solar Panel Using the Pole Clamp Kit (213473)

The Pole Clamp Kit (213473) uses two steel strap clamps to secure your solar panel bracket firmly around the flagpole shaft. Before you begin, choose a mounting location that faces south and is free from shade or obstructions.

Repeat the following steps twice — once for the upper clamp and once for the lower clamp:

1. Thread the steel strap around the flagpole shaft and through the panel bracket, positioning it at the correct height on the pole.
2. Bend the steel strap approximately 90° so the teeth tab can pass through the second hole in the strap.
3. Press the fastener down until the teeth tab clicks into the slot of the strap.
4. Feed the opposite end of the steel strap into the fastener.
5. Trim any excess strap length and clip it flat against the assembly.
6. Tighten the fastener with a screwdriver, turning clockwise, until the clamp holds firmly against the pole.

Once both clamps are installed:

1. Confirm the panel bracket is level and does not rotate or shift on the pole.
2. Angle the panel toward true south at a tilt equal to your local latitude for best year-round charging performance.

Step 3: Connect the Battery to the Controller

CRITICAL: This must be the first connection you make. Connecting in the wrong order may permanently damage the controller.

1. Locate the battery terminals on the controller (labeled BAT or with +/- symbols).
2. Use the provided one-way quick connectors — they are keyed to prevent reverse polarity. Connect the battery to the controller.
3. The controller LCD display will illuminate confirming power





Professional & Premium Solar Package Installation Instructions

Step 4: Configure the Controller Settings

CRITICAL: The controller ships with Battery Type set to B1. You must change this to B3 immediately to match the LiFePO4 battery included in your package. Failure to do so will reduce battery life and may cause damage.

Setting	Value
Battery Type	B3 (default is B1 — change immediately!)
Charging Voltage	14.8V max
Low Voltage Reconnection	12.0V min
Low Voltage Disconnection	10.7V min
Load Working Mode	0 Hr. (not 24 Hr.)

How to Access Settings

- In interface screens 2–5, press and hold ▲ for five seconds to restore defaults.
- Press and hold the SET key (≡) for five seconds to enter manual settings mode. The number will flash.
- Press ▲ and ▼ to adjust the parameter value.
- When finished, press the SET key (≡) for three seconds to exit the setting.

Step 5: Connect the Solar Panel (Collector) to the Controller

1. Locate the solar panel input terminals on the controller (labeled PV or SOLAR).
2. Connect the solar panel output cable to the controller using the provided one-way quick connectors. White to White, Black to Black.
3. The controller will display the incoming solar charge current when sunlight is available.

Step 6: Connect the Beacon (Load) to the Controller

1. Locate the load output terminals on the controller (labeled LOAD).
2. Connect the Beacon power cable to the load terminals using the provided connectors.
3. The controller will power the Beacon automatically at dusk and cut power at dawn based on the 0 Hr. load working mode setting.



Professional & Premium Solar Package

Installation Instructions

Step 7: Final Verification

1. Confirm all four connections are secure: Battery → Controller, Solar Panel → Controller, Beacon → Controller.
2. Check the controller LCD for battery voltage (should read 12.0V or above for a charged battery).
3. If using the optional 120V plug-in charger, charge the battery to full before first deployment.
4. Cover and weatherproof all exposed connections as appropriate for your installation environment.
5. Monitor the system for the first 24–48 hours to confirm the Beacon illuminates at dusk and charges during daylight

Troubleshooting

Symptom	Possible Cause	Solution
Controller display is blank	Battery not connected or depleted	Check battery connection; charge with optional 120V charger
Beacon does not turn on at night	Load Working Mode set incorrectly	Confirm Load Working Mode is set to 0 Hr. (not 24 Hr.)
Battery drains in < expected hours	Battery Type still set to B1	Change Battery Type to B3 in controller settings immediately
Solar panel not charging	Connections reversed or loose	Check PV connections; White to White, Black to Black
Fuse blown	Short circuit or overload	Replace inline fuse; check wiring for shorts before restarting

Maintenance

- Solar Panel: Wipe the panel surface with a soft damp cloth periodically to remove dust, pollen, and debris. Do not use abrasive cleaners.
- Battery: The LiFePO4 battery blocks are field-replaceable. If capacity degrades significantly after years of use, order a replacement from FlagCo.
- Connections: Inspect all quick connectors annually. Clean any corrosion with electrical contact cleaner.

Maintenance

FlagCo — Proudly Made in Georgia, USA Phone: (800) 962-0956 Email: info@flagco.com
For installation videos, FAQs, and replacement parts, visit your FlagCo distributor or contact us directly.